



Total Solution Provider in Saw Device

SA09221AD1

92.20 MHz IF SAW Filter
21.12 MHz Bandwidth
Revision 0: 16. July. 2010



- Electrical Characteristics
 - Package Dimensions
 - Testing Environment
 - Frequency Characteristics
-

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□ Electrical Characteristics

Maximum Ratings

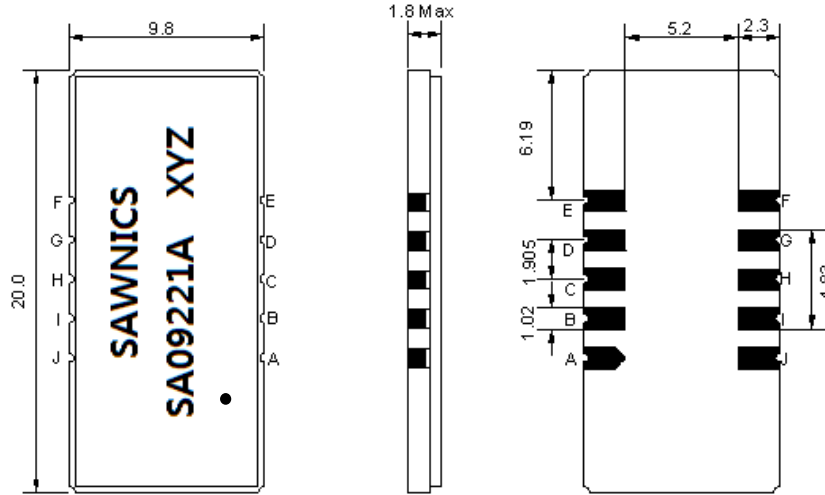
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-	25	-
Storage Temperature Range	°C	-40	-	+85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Load Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Package type & size	D1			
Length x Width	mm ²	-	20.0 x 9.8	-
Height	mm	-	-	1.8

Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	92.20	-
Insertion Loss at Fo	dB	-	21.80	23.50
Group Delay Variation (Fo±10.30MHz)	nsec	-	43	80
Absolute Delay at Fo	usec	-	2.17	2.30
Passband Ripple Variation(Fo±10.30MHz)	dB	-	0.55	1.00
Bandwidth at -1dB	MHz	20.85	21.12	-
Bandwidth at -3dB	MHz	-	21.47	-
Bandwidth at -20dB	MHz	-	22.38	-
Bandwidth at -40dB	MHz	-	22.79	22.95
Ultimate Rejection	dB	50	55	-
Temperature Coefficient	ppm/°C	-	-72	-

Notes : (1) With Matching Network (Ref. Testing Environment Circuit as shown below).
Those impedances could be modified with different impedance values and/or structures, if necessary.

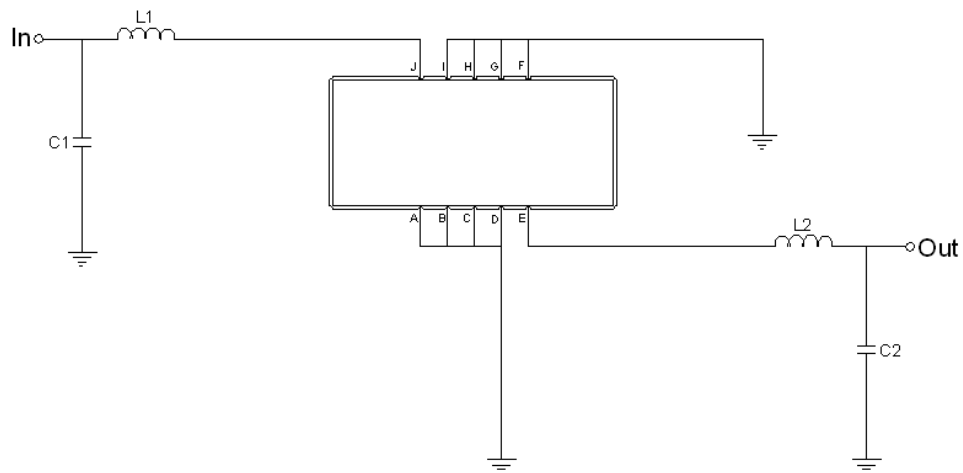
Package Dimensions



- ① SAWNICS: Brand
- ② SA09221A: Model Name
- ③ X : Date Code (Year)
- ④ Y : Date Code (Month)
- ⑤ Z : Date Code (Date)
- : Index Dot

Pin Description	
A, B, C, D, F, G, H, I	Ground
J	Input
E	Output

Testing Environment



Test Fixture & Values	
Input	L1 = 100 nH, C1=12 pF
Output	L2 = 100 nH, C2=10 pF
Source/Load Impedance	50 Ω

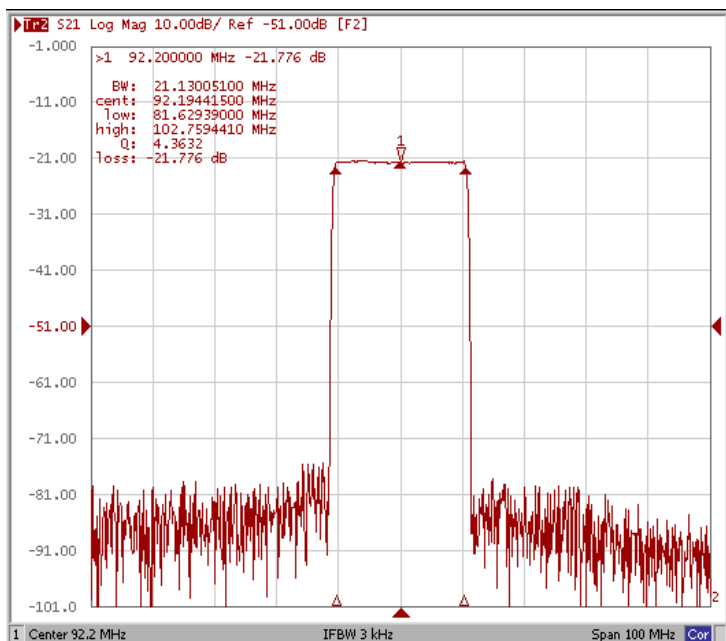


Frequency Characteristics

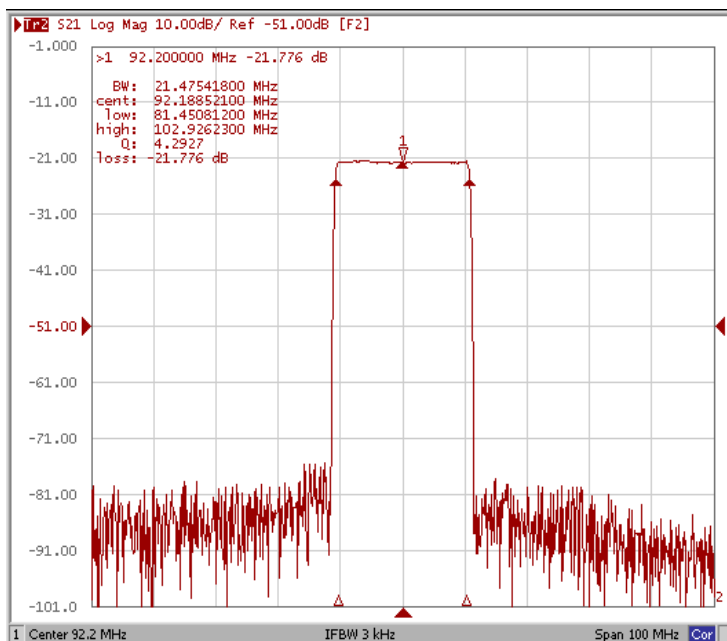
Frequency Response

Operating Temperature : +25 °C

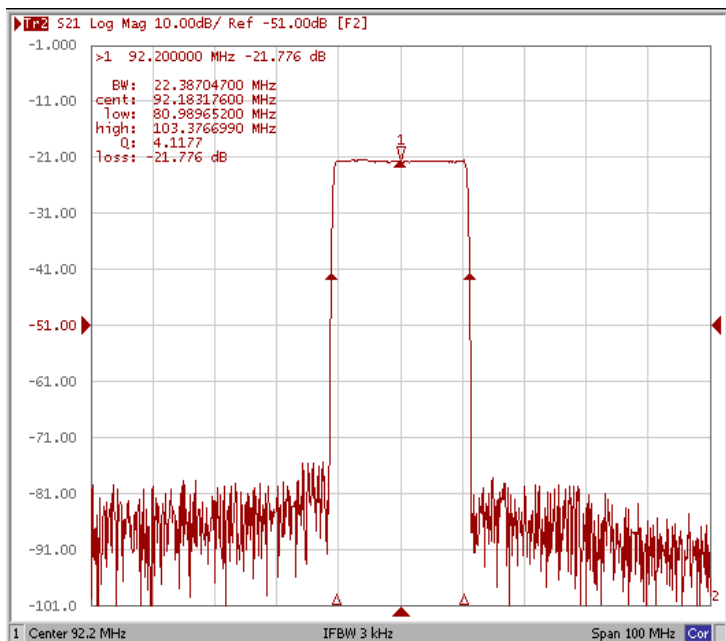
Bandwidth at -1.0 dB



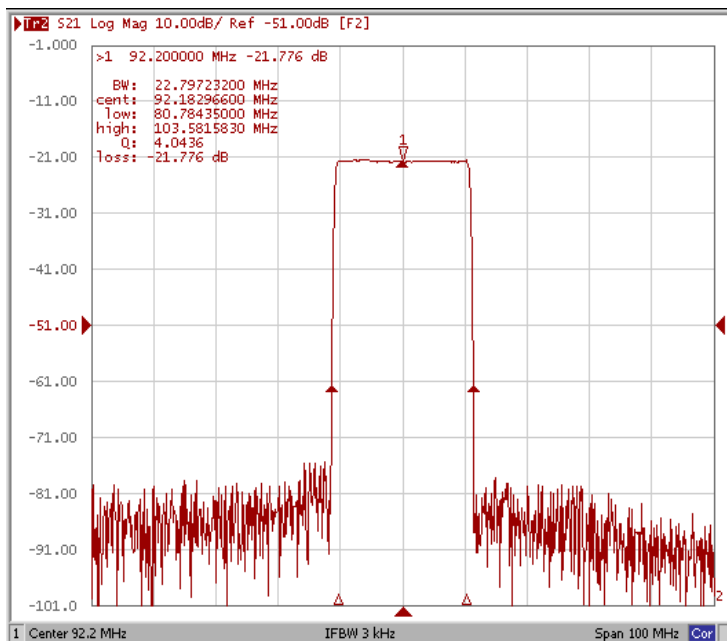
Bandwidth at -3.0 dB



Bandwidth at -20.0 dB



Bandwidth at -40.0 dB

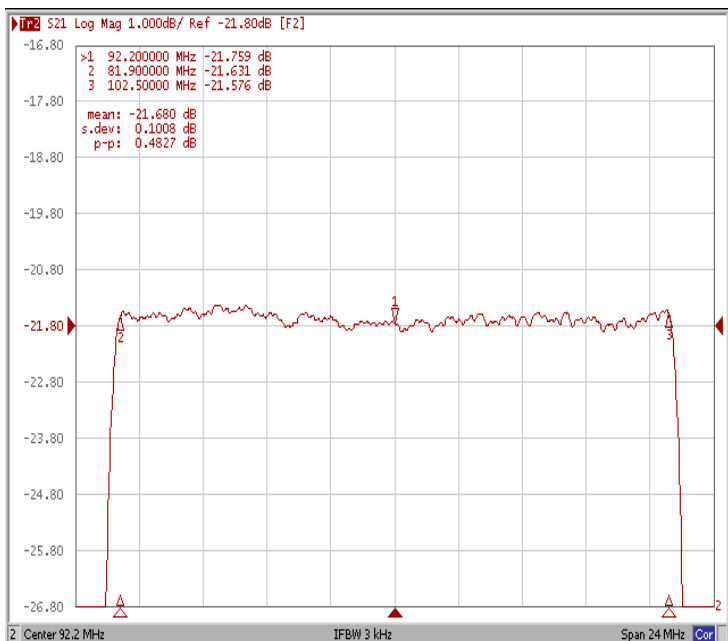




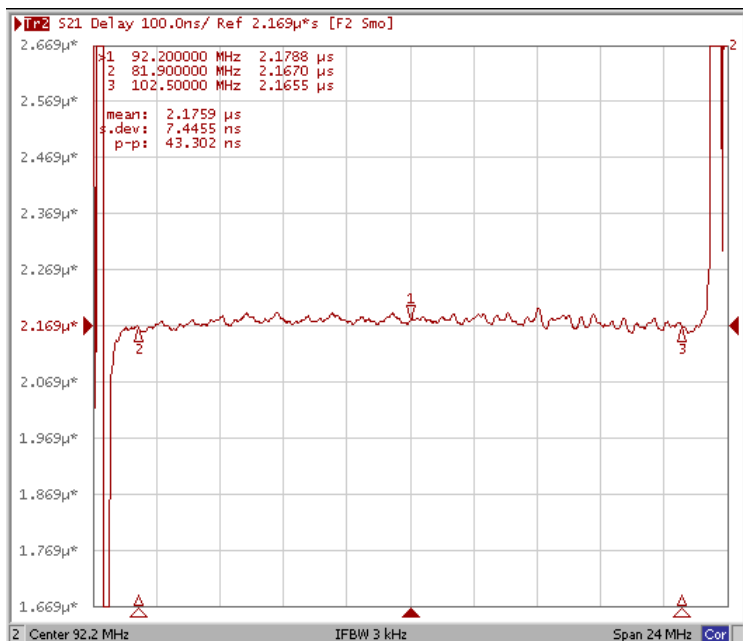
Frequency Characteristics

Frequency Response

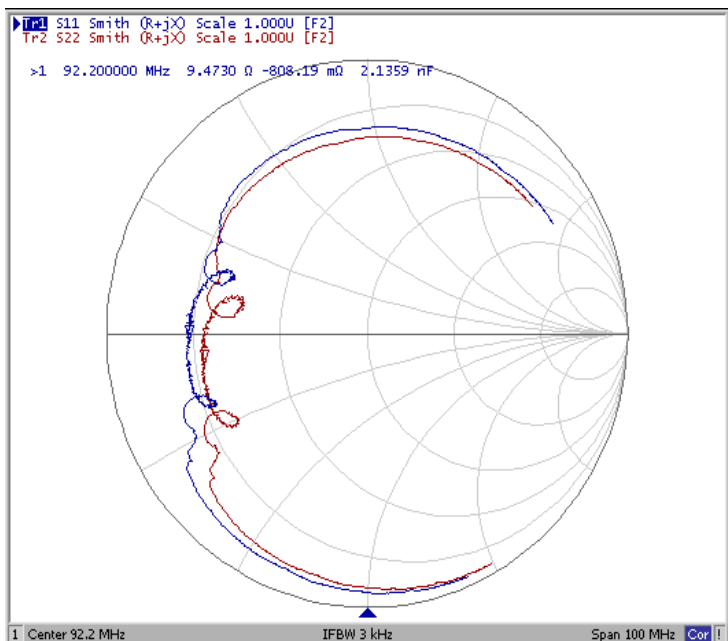
Ripple Variation Fo±10.30MHz



Group Delay Variation Fo±10.30MHz



Smith Chart



VSWR

